REMARKS

CLAIMS 1-18, 32 AND 33

Claims 1-14 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Su et al. (U.S. Patent 5,418,717, hereinafter Su). Claims 15-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Su in view of Boman et al. (U.S. Patent 6,480,819, hereinafter Boman). With the present amendment, independent claim 1 has been amended to include the limitation of claim 4 and to further clarify the steps of generating a translation probability. Claims 3 and 4 have been canceled. Claims 32 and 33 have been added and depend from claim 1.

As amended, claim 1 provides a method of identifying a semantic structure from a text. The method includes identifying semantic entities from the text and combining semantic entities to form at least two candidate semantic structures. A semantic score is generated for each candidate semantic structure based on the likelihood of the semantic structures. A transition score is generated for each candidate semantic structure by generating a separate transition probability for each pair of semantic entities that appear on a same level in a candidate semantic structure. Generating a transition probability comprises using the types of the semantic entities in the pair of semantic entities to retrieve a value used to generate the transition probability. A syntactic score is generated for each candidate semantic structure based in part on the position of a word in the text and the position in the semantic structure of a semantic entity formed from the word. The syntactic score, the transition score and the semantic score for each candidate semantic structure are combined to select one of the candidate semantic structures for at least a portion of the text.

As amended, claim 1 is not shown or suggested in the combination of Su and Boman. In particular, neither reference shows or suggests the generation of transition probabilities for a pair of semantic entities that appear on the same level in a candidate semantic structure by using the types of the semantic entities to retrieve a value used to generate the transition probability.

In the Office Action, claim 4 was rejected by citing column 22, lines 47-52 of Su. In particular, it was asserted that this section of Su discloses the use of "syntactic score probabilities" applied to different phrase levels within a syntax tree.

In the cited section, Su discusses the probability of reducing a phrase level into a lower level by applying stored syntactic score probabilities for each pair of phrase levels. In column 9, lines 31-51, Su indicates that such syntactic probabilities are computed by a syntactic score module 323. Syntactic score module 323 determines the score based on a string that "may include a word under examination, some words or syntactic categories to the left of that word, and some words to the right for a total of some pre-selected number of words and/or syntactic categories." (Su, column 9, lines 44-49) Thus, syntactic score module 323 uses syntactic and not semantic information to determine the syntactic score. In particular, Su does not indicate that syntactic score module 323 uses semantic entity types to generate a transition probability. Instead, it uses syntactic information and word information to determine its syntactic score.

This is substantially different from the invention of claim 1, wherein a transition score is computed using the types of the semantic entities in a pair of semantic entities on a same level. Since Su uses syntactic information and not semantic types to determine its syntactic score, the combination of Su and Boman does not show or suggest the invention of claim 1 or claims 2 and 5-18, which depend therefrom.

CLAIMS 19-31

Claim 19 provides a computer-readable medium having computer-executable instructions for performing a series of steps. The steps include identifying semantic entities from a text and forming a set of partial semantic structures from the semantic entities. Each of the partial semantic structures is scored and at least one semantic structure is pruned while at least one other partial semantic structure is retained based on the scores for the partial semantic structures. A full semantic structure is formed from a retained partial semantic structure wherein the full semantic structure includes all semantic entities identified from the text. A determination is made that the full semantic structure is not a command semantic structure and the full semantic structure is placed in multiple command semantic structures. Each command semantic structure is then scored and one of the command semantic structures is selected based on the scores.

With the present amendment, claims 27 and 28 have been added to claim 19 and claims 27 and 28 have been canceled.

As amended, claim 19 is not shown in the combination of Su and Boman. In particular, neither Su nor Boman determine that a full semantic structure is not a command semantic structure and then place the full semantic structure in multiple command semantic structures. In the Office Action, it was asserted that because Boman is able to distinguish between a command and a description or program content, it shows a determination that a full semantic structure is not a command semantic structure and placing the full semantic structure in multiple command semantic structures. Applicant respectfully disputes this assertion.

Under Boman, if it is determined that a full semantic structure is not a command semantic structure, the full semantic structure is not placed in multiple command semantic structures. Instead, Boman treats the input as a content search instead of a command. This is substantially different from claim 19, wherein if the full semantic structure itself is not a command semantic structure, the full semantic structure is placed within multiple command semantic structures so that a command semantic structure that could be represented by the full semantic structure can be identified. Neither Boman nor Su show or suggest placing a full semantic structure in multiple command structures after determining that a full semantic structure is not a command semantic structure itself. As such, the combination of Boman and Su does not show or suggest the invention of claim 19 or claims 20-26 and 29-31, which depend therefrom.

CONCLUSION

Although Applicant has not discussed many of the dependent claims separately, Applicant believes that many of the dependent claims are additionally patentable over the cited art.

In light of the above remarks, reconsideration and allowance of claims 1, 2, 5-26 and 29-33 is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By:____
Theodore M. Magee, Reg. No. 39,758
900 Second Avenue South, Suite 1400
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

TMM:sew